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## THE EARLY HISTORY OF THE McLEAN ASYLUM FOR THE INSANE.

A CRITICISM OF THE REPORT OF THE STATE BOARD OF HEALTH FOR  
1877.

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THE Report of the State Board of Health of Massachusetts for the present year contains an article, by the secretary of the board, entitled *Disease of the Mind*. Its principal object, in the words of the general report of the board, is to show, "by citing well-known historical facts, that during the past century very great strides have been made in the treatment of mental disease."

After quoting from the reports of Dr. Bell and of Dr. Earle, made in 1847 and 1848, with regard to the very few instances of personal restraint of the insane under their care, the secretary makes the following statement. The paragraph is quoted entire.

"With all this, the excited insane were found by a committee of our legislature in 1848 to be at the Worcester Asylum even in small rooms, 'having the least advantages for light, none for ventilation, unfavorably located, dark, dreary, damp, and uncomfortable to that extent as to aggravate rather than to assist the cure of the unfortunate beings placed there;' the male violent insane at the McLean Asylum, then considered one of the best, were kept in stone cells in the cellar; and this simply indicates the general knowledge of the time. The position and condition of the more quiet of the insane in asylums were very much better of course; but it was reserved for further study and experience to show that the most violent may be treated to a certain extent in a similar way."<sup>1</sup>

Many persons, medical men and others, have received from this statement very erroneous impressions as to the apartments and treatment of the violent male insane at the McLean Asylum. If these impressions were well founded it would be a stain upon the reputation of those who instituted and continued such measures, and upon the board of trustees, for whose fidelity and judicious care of the asylum from its foundation it would be hard to find a parallel.

<sup>1</sup> Board of Health Report for 1877, page 353.

I have therefore thought it best to correct the errors of statement in the above extract by a carefully prepared description, with drawings, of the building occupied by the violent male insane, and also to show what was the state of knowledge with regard to insanity and its treatment generally at the McLean previous to the period referred to.

I am impelled to do this not only because the statement is a part of the report of the State Board of Health, and has been distributed as such, but also because it has been distributed in a separate pamphlet, with an authority which would not have attached to an individual writer.

It may be here remarked that I have more than a general interest in correcting these errors. My father, Dr. Rufus Wyman, was appointed in 1818 the first physician and superintendent of the asylum; in 1835, after seventeen years of service, his health failing under the care and anxiety inseparable from such an institution, he resigned. My early life and a part of my medical pupilage were spent there. I may therefore be presumed to know something of its history.

When my father entered upon his duties he found buildings already erected. They consisted of a large and elegant house, the mansion of a gentleman of wealth, to which the trustees of the hospital had added two wings, each seventy-six feet in length by forty in breadth. The eminence upon which these buildings stand is remarkable for its beauty, and although, in the words of the trustees, "the situation selected appears to unite every practical advantage," it is much too small to admit of the proper arrangement of the buildings on the same level. The wings, as originally built, not differing materially in plan from hotels, are on a level several feet lower than the mansion. The buildings since added are necessarily on a still lower level. This abrupt slope, although it has some advantage and gives excellent opportunity for drainage, has compelled a crowding together of the different structures, not desirable, and no little skill and ingenuity have been required to obviate to the present extent this objection.

"The male violent insane were kept in stone cells in the cellar." How far this statement correctly represents the facts it is now proposed to examine.

The apartments occupied by the violent male insane in 1848, the rooms to which the report refers, are known at the asylum as the "strong rooms," and are four in number. They are in a brick building, fifty-four feet by twenty-three feet, called the "lodge" or "retreat;" it stands at the east of the mansion and quite detached from it. It was planned by my father and built under his direction in 1826. I have his original memoranda and manuscript plans, with a report to the trustees in March, 1825, on additions to be made to the asylum, of which this building was one.

When the "lodge" was built, the McLean Asylum, which was the

first in New England, had been open eight years; during this period it had received a larger proportion than ever since of patients from jails and almshouses, where they had no proper care. Some, neglected by those who had charge of them, were filthy and noisy; treated for years like lower animals, they came to resemble them in many of their habits; they had no proper rooms, and suffering from cold in winter were often confined in cellars; their keepers, glad to be rid of them, sent them to the newly opened asylum. Subsequently, the earlier removal of the insane to asylums probably greatly diminished the number who fell into this dreadful condition.

The "lodge" was originally of two stories, the upper intended for idiots and epileptics, those who were objectionable in their habits or subject to sudden outbreaks of frenzy. In this story the rooms were arranged as to warming, ventilation, and lighting as in the story below; the floor was to be warmed by steam or hot air circulating in channels beneath it. These apartments, however, were never finished, the number of patients requiring them having lessened. They were afterwards remodeled and fitted for a different class of persons. The remaining parts of the "lodge" are as originally built, with the exception of an upper story added by Dr. Bell in 1850.

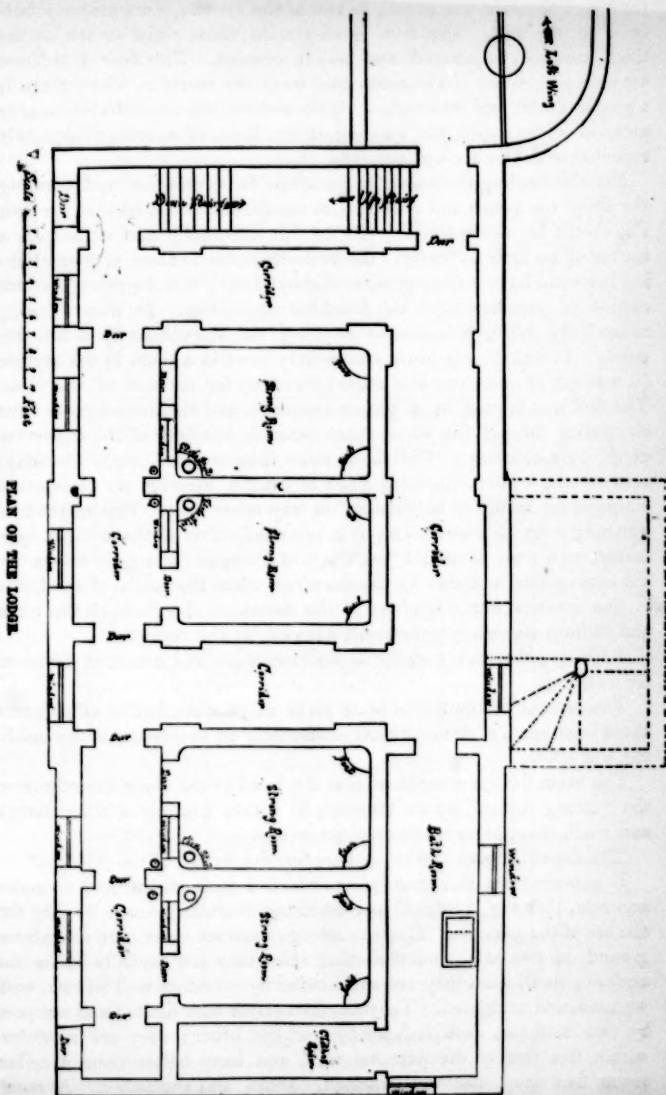
The lower story contains the "strong rooms." They are now as when first built, except the front walls, which were removed last year when the building was transferred to the steward's department. The class of boarders formerly occupying them is now in the "Bowditch ward" for excited cases.

It should be distinctly understood that these rooms were exclusively for those unfortunate persons, some of whom are to be found in most large asylums, who at times are violent and noisy, who destroy their clothing, their bedding, even to the very mattresses on which they sleep, who defile their rooms in every possible way, — the most violent male insane. No others were ever placed in these rooms. Their number is small; these four rooms were more than sufficient for one hundred and fifty male boarders at the McLean. Mr. Tyler, for more than thirty years connected with the asylum as attendant, supervisor, and steward, a highly valued officer, assures me that more than two rooms were never known to have been occupied at the same time. But small as the number is, even if it be but a single individual, he should be provided for in the manner best suited to his individual case. How this is to be done has been a difficult problem, and probably always will be. Reasoning and persuasion can avail nothing. They may be drugged with narcotics, but experience has decided against this plan for any length of time. Some would have them kept in apartments similar to those of the more quiet, and in their vicinity, holding and restraining them by sufficient manual force; others think they should be secured and prevented from

doing mischief to themselves or others by means of manacles, strait-waistcoats, camisoles, muffs or mittens, as producing less desire for resistance than when opposed by manual strength. But neither of these plans prevent noise and filth, which render them utterly unfit companions for the more quiet. Others again prefer to abolish all restraint upon the limbs, and while the paroxysm lasts leave these most unfortunate sufferers in proper apartments, where they can be made safe, and as far as possible comfortable, allowed the full exercise of their limbs, and where neither their noise nor their habits will disturb any one. This last is the method adopted by my father at the McLean, and was continued during the administration of Dr. Bell, who succeeded him at the asylum in 1836. It was to carry out this method that he urged upon the trustees in 1825 the immediate erection of the "lodge."

In consequence of the formation of the ground, as above described, one side and one end of the lower story of the "lodge" for about one half its height, stands against a retaining wall. The other side (the front) and the other end opened upon an airing court fifty-seven by fifty; the floor of the "lodge" generally is *two feet above the surface of the ground*, the western end somewhat less, the ground falling off from the building in both these directions. On this floor, at this height above the surface of the ground, and in the front of the building, are the "strong rooms." Below the floors of these rooms is the cellar, about seven feet deep, extending under the whole building. This cellar is well lighted with windows on the front and end, paved with bricks, well ventilated, and every part clean and whitened. Here is the furnace for heating the air for warming and ventilating the "strong rooms" above, and also the especial arrangement for *warming their floors*. These "strong rooms" nowhere come in contact with the external walls; they are completely surrounded by corridors about five feet wide, properly ventilated and warmed, summer and winter. They are lighted by windows in the front wall, and also by smaller windows on the opposite side. The "strong rooms" are eleven feet by seven and a half on the floor, ten feet in height, the ceiling an elliptic arch, with a ventilating flue in the centre. They are entered by doors from the corridors, and lighted through unglazed windows about two feet square, never closed in any way. Directly opposite these windows are the large windows, about three by five feet, in the front of the building, opening upon the airing court. In the corridor are doors by which each room is completely separated from the others, and sound cut off as much as possible. Each room can be reached without passing any other. The walls, like those of other rooms in the asylum, are of brick plastered with Portland cement, made as smooth as possible; the corners are rounded for cleanliness, as has recently been done for the new wards of the Massachusetts General Hospital. In one corner is a close-stool communicating with the corridor





through the side of the room; in two of the corners, seats properly fastened to the wall. The floor is of granite slabs, eight or ten inches thick, smoothly hammered, and laid in cement. This floor is inclined towards one corner of the room, that next the corridor, where there is a proper outlet and waste-pipe. This secures the immediate draining away of water during the washing of the floor, of necessity frequently repeated with this class of patients.

Notwithstanding the ample preparations for ventilation and warming the air of the rooms and corridors, it was deemed essential that the floor also should be well warmed. To do this effectually and equably is a matter of no little difficulty. To be comfortable to those without clothing it should have a temperature of about 100°; this degree of warmth cannot be obtained from air fitted for respiration. In these "strong rooms" the difficulty is met by warming the stone floor by a fire beneath. It had already been successfully tried in a room in the asylum (it was not of stone nor in a cellar) fitted up for patients of this class. The fuel was burned in a proper fire-place, and the heated gases after circulating through the whole space beneath the floor of the rooms escaped by a chimney. The floors were thus warmed night and day, summer and winter, the thick slabs of granite keeping up an equable temperature hardly to be obtained in any other way. This method of warming is by no means new; it is essentially that of the ancient *hypocaust*, used two thousand years ago at Pompeii, as is fully shown by the excavations and also by the drawings upon the walls of the baths in this favorite watering-place of the Romans. In Pompeii the walls and ceilings also were hollow and warmed by the same fire.

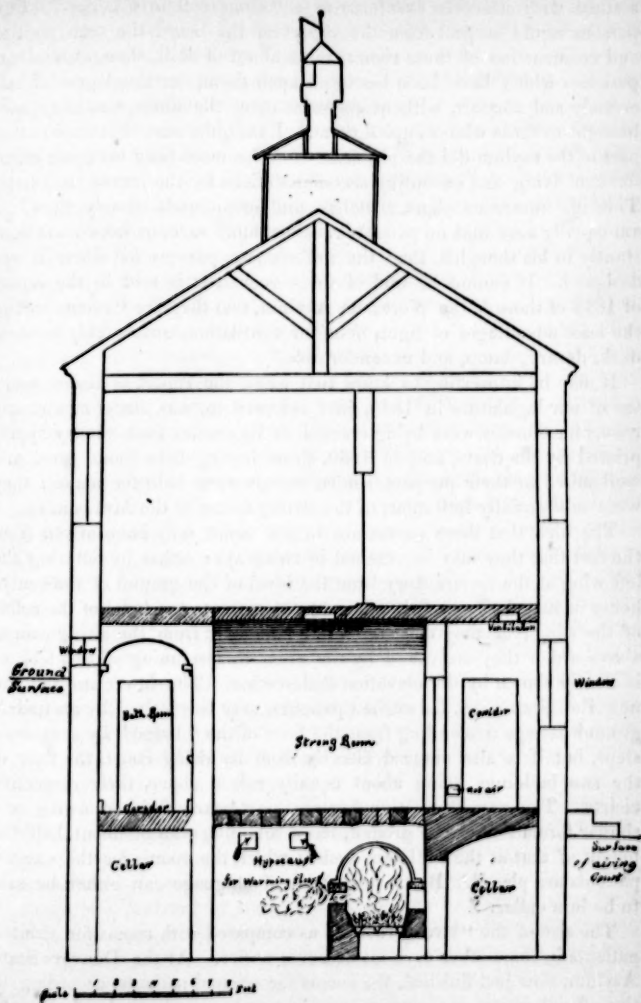
Adjoining the main corridor is the bath-room, and near that the room for clothing.

The interior of the rooms is as plain as possible, but in other parts there is as much of architectural ornamentation as the use of the building will allow.

The room for the attendants is at the head of the stairs directly over the "strong rooms," where they can be within hearing of their charge and reach them at once either night or day.

The drawings give in plan and section the details of the "lodge."

It appears from this description, which I have endeavored to make accurate, that the "lodge" had an airing court fifty-seven by fifty for the use of the patients. That the strong rooms are quite open and above ground on two sides; on the other sides they are partially below the surface; on all sides they are surrounded by corridors well lighted, well warmed, and ventilated. They are themselves fully lighted and warmed by two methods, each independent of the other; they are nowhere within five feet of the external wall, and have below them a cellar seven feet deep, also well warmed, lighted, and ventilated. A room



SECTION OF THE LODGE.

so situated, having but one of its six sides of stone, can hardly be described with scientific exactness as a "stone cell in a cellar." Few persons would suspect from the report of the board the true position and construction of these rooms, the amount of skill, thought, and experience which have been bestowed upon them, nor the degree of safe custody and comfort, without restraint upon the limbs, that they have brought to those who occupied them. I am quite sure that on no other part of the asylum did the physician exercise more fully his great talent for contriving and executing accommodations for the insane than here. This his numerous plans, sketches, and memoranda clearly show. I am equally sure that no patients received more care, or were more constantly in his thoughts, than the unfortunate persons for whom it was designed. It cannot be said of these rooms, as is said in the report of 1848 of those in the Worcester Asylum, that they are "rooms having the least advantages of light, none for ventilation, unfavorably located, dark, dreary, damp, and uncomfortable."

It may be interesting to know that when the report of the committee of our legislature in 1848, just referred to, was made, new strong rooms for females were being erected at Worcester from money appropriated by the State, and in 1850, these having been found good and well suited to their purpose, similar rooms were built for males; they were substantially imitations of the strong rooms of the McLean.

The idea that these rooms are in the cellar may have arisen from the fact that they may be reached in two ways: either by entering the left wing at the second story from the level of the ground of the centre house or mansion, and descending by the stairs to the level of the cellar of the wing; or they may be entered directly from the airing courts, above which they are raised by the usual underpinning of two feet, as is clearly shown by the elevation and section. The lower story of the new Bowditch ward, for excited patients, may be reached by an underground passage descending from the floor of the "lodge" by seventeen steps, but it is also entered directly from its airing court, the floor of the two buildings being about equally raised above their respective courts. The new Worcester Asylum, now nearly finished, owing to a similar formation of the ground, has a retaining wall of about half the height of that at the McLean, against which the rooms for the excited patients are placed. By no proper use of language can either be said to be in a cellar.

The size of the "strong rooms" as compared with rooms for excited patients in some other asylums deserves notice. At the Danvers State Asylum, now just finished, the rooms for excited patients, according to the official report, are seventy-two in number, each twelve feet long, eight feet wide, and eleven and one half feet high; at the McLean they are eleven feet long, seven and one half feet wide, and ten feet

high ; at the new Worcester State Asylum, nearly finished, they are ten feet long, eight and one half feet wide, and eight feet and eight inches high ; the cubic space for each patient at the Danvers is the greatest, the McLean next, and the Worcester last.

The materials of which the walls of the several rooms in these three asylums are constructed are substantially the same : in all they are of brick ; at Danvers and the McLean, plastered with Portland cement in the neatest and smoothest manner ; at Worcester, of bricks painted, without plaster. The McLean is the only one with rounded corners. The floors at Danvers and Worcester are of wood, not warmed ; those at the McLean are of stone, warmed.

The McLean "strong room" was provided with a comfortable mattress, or if this were destroyed with the best materials as a substitute that could be found. It had seats and a close-stool. By a strict rule of the asylum these rooms were the first visited in the morning. Every morning before breakfast the patient was bathed and placed in a similar adjoining room. Everything which had become soiled was removed, the room carefully washed, and the walls and floor carefully cleaned with transparent lime-water, which left the walls free from odor and visible lime deposit. The warm stone floor, besides the comfort it gives, must, in a sanitary point of view, be considered the best. It does not absorb offensive matter of any kind, — a very important fact if *faecal* matter is the source of so much "germ disease," as sanitarians now assert ; it is quickly dried, and again fit for use. If really better than wood it should not be rejected because of its apparent harshness, and it would not be if we consider for a moment the condition of the patients. They have been accommodated elsewhere as long as possible. They are violent and raving in their excitement or delirium, pay little attention to their surroundings, and are so wanting in regard to the common decencies of life that, for the quiet and comfort of others as well as of themselves, their temporary seclusion has become a necessity. As to the floor itself, it is practically no harder than a hard pine floor ; neither yields to the pressure of the body.

Dr. Bell, in his report for 1839, after more than ten years' experience, says of these patients : "There are, it is true, certain cases where the mind is so frenzied and chaotic that the individual is reckless and unconscious of what he does ; here the provision of a suitable lodge room with stone floor, warmed by steam or hot air below, without glass or movable furniture, is the best and kindest appliance which can be adopted for a few days until medical and soothing treatment can place the sufferer in a condition to be operated upon by moral means. We never have had occasion, since the institution has been under my care, to use strong rooms as places of permanent detention, a few weeks being the extent of time which they have ever been occupied by a single person."

The following letter from the eminent alienist, Dr. Isaac Ray, gives his opinion of the "strong rooms," and their fitness for those who occupied them : —

MY DEAR SIR, — I recollect perfectly the rooms of the violent and excited patients at the McLean Asylum, to which you refer. They were in the basement story, and constructed very much like other patients' rooms. They opened upon a common corridor, some four or five feet wide, which was lighted by ordinary windows in the wall. This light passed into the rooms through an unglazed window by the side of the door. The floors were made of stone slabs, which were heated by a fire beneath, and thus the air was warmed by heat radiated from the floors. I always thought them very well fitted for their allotted purpose, that of keeping violent, raving patients, and I never saw them occupied by any others. They were justly regarded, I think, considerably in advance of any other existing means for keeping that description of patients. Of course improvements have followed the increase of means. The rooms now used for that purpose look out by a glazed window into a yard, the walls are smoothly plastered, the use of steam has led to a better method of warming, and the doors open upon a long, broad hall, tastefully wainscoted and painted. All these were very desirable, as anything is which gives a more cheerful aspect to the patient's surroundings. But they add little or nothing to the essential requisites of a strong-room, — freedom of movement, perfect cleanliness, good warmth, and ventilation, — and in these particulars the old lodge rooms have never been surpassed, to my knowledge.

Dr. Folsom speaks of the strong rooms at Worcester and at the McLean in the same breath, and in such a manner that an incautious reader might suppose there was little to choose between them. It would not be worth while now to describe the former. It is enough to say that they were destitute of the prime requisites just mentioned, while their surroundings were of the most repulsive character.

You are at liberty to make any use of this letter which will serve your purpose.

Yours truly,

I. RAY.

DR. WYMAN.

3509 BARKING STREET, PHILADELPHIA, September, 1877.

Having corrected the errors of statement as to the rooms for the resident insane, I will now consider the state of knowledge with regard to insanity and its treatment at the McLean.

The report of the board assures us that the state of things which it assumes to have existed at the McLean in 1848 "simply indicated the general knowledge of the time," — a somewhat sweeping conclusion and not very precise in its meaning. It is reasonable to conclude, however, that whatever else was intended by the expression it means that the state of knowledge at that time was at a low ebb. It is possible,



too, that the generalization was first made in the interest of progress, and in seeking for facts in support of this statement the selection of the McLean is not quite happy. However this may be, as the McLean has been selected it is now proposed to show from memoranda and the report of its physician in 1825 the knowledge with regard to the treatment of the insane then existing. There is no reason to believe that this knowledge was less in 1848.

The report to the trustees from which the following extracts are made is dated March, 1825:—

“In constructing buildings for lunatics, their comfort, happiness, and cure should be regarded as the ultimate and all-important objects. Other objects contributing to the accomplishment of these great ends are of almost equal importance. Among these are provisions for the attendants conveniently to manage the patients and to execute the orders and directions of those to whom is confided the general superintendence of the institution. Upon the care, fidelity, and experience of the attendants, the quiet conduct and the eventual recovery of the boarders greatly depend. Suitable attendants cannot be procured unless their convenience in the discharge of their duties be duly regarded, or if procured must be often changed, and consequently they will never acquire the requisite experience.”

“Few persons who are qualified to have the oversight and to be the companions of the boarders will be willing to perform the menial services. Indeed, these services degrade the attendant in the opinion of those under his care, and render them less submissive and respectful in their deportment. He should therefore have an assistant. The attendant would be likely to remain in the asylum a long time, and the often changing of the assistant, if necessary, would be attended with little inconvenience.”

At this time the attendants, many of whom had been school-teachers, were selected with great care, usually on the recommendation of their clergymen. The principal attendants were required to keep journals recording the condition of those under their care and other matters pertaining to the administration of their office. This was done not only for the inspection of the physicians, but also to secure vigilance and close observation on the part of the attendants.

“The feelings and opinions of relatives and friends of lunatics must be consulted, for they are to select the residence of those under their care.”

“The public also must be consulted, for the institution, in a great degree, depends upon the charities of the public for its support, especially for the funds to defray the expenses of erecting its buildings. These contributions are to be expended with the greatest caution. Every measure and every plan should be well digested before any attempt to execute it.”

"The first great object presented is a proper classification of the subjects of a lunatic asylum. The evils to be avoided by an entire separation of males from females are so apparent that no arguments are needed to show its propriety. A further division of lunatics of either sex into distinct classes or families is not to be disputed. But the difficulties attending a suitable division are very great. These difficulties are various according to the form of government, the laws and customs of the country, and habits of the lunatics. In all cases the quiet are to be separated from the noisy and violent, the clean from the dirty, the clothed from the naked, and the latter from each other, that one patient should in the least possible degree disturb or offend another. Each division should form a little family, producing the greatest degree of comfort and happiness of which its members are susceptible. Some individuals who are much disturbed by noise require the most perfect seclusion and solitude; for these two rooms are so constructed and so situated that they may be suitably accommodated. They will also answer for ordinary sleeping rooms."

"There are lunatic males who are generally tranquil, harmless, susceptible of much enjoyment, capable of walking abroad without an attendant, and in fact requiring little or no restraint. Their friends find it necessary to send such persons from home. They desire for them large, handsome, and convenient apartments, and sometimes accommodations for a servant. They are willing to pay in proportion to the accommodations required. Such boarders may constitute a single family, called *house boarders*, and have apartments in the connecting wings and front part of the centre house."

One or more boarders were always at the physician's table, had rooms in the mansion house, and mingled with his family, went to Boston and elsewhere, and always without an attendant. The more quiet also passed their evenings in the physician's family, and always appeared and were treated like other gentlemen. Some occupied themselves for months together as teachers of the physician's children, with advantage to both.

"Class I. Other lunatics, whose friends may wish for them handsome rooms and galleries, and have the means of paying the necessary expenses, still require to be restrained, and their rooms and airing courts must be so constructed that they cannot easily escape. These may constitute the first class, occupy one wing, and be divided into three families, each living in a single story. The convalescents and most tranquil may take the upper story, the most noisy and turbulent may take the basement story, and the remainder may take the middle story."

"Class II. A second class, requiring to be restrained, may occupy the other wing. Neither their habits of life nor their pecuniary means will

require or permit the rooms of this class to be finished or furnished in a style so expensive as those of the first class. They may, however, be provided with every comfort and convenience to be found in the apartments of the other class, and have everything adapted to their habits and feelings. This class will also be divided into three families, to be distributed in the several stories as is contemplated for the first class. Provision is made for a further and temporary division of apartments whenever any particular boarders are found to have aversions to each other."

"The wings thus improved would contain accommodations for the quiet, the sick, and those who are not excessively noisy."

"Class III. The very noisy, dirty, and violent patients will form a third class. They may possibly be kept in the wing for the second class. But it is believed a distinct building is to be preferred. Apartments may be provided in the same building for idiots and epileptics. The principal objection to this separation is that the worst patients being far removed would be likely to be neglected. But the comfort and tranquillity of the other patients require the removal, and the neglect must be prevented by increased vigilance."

We here see some of the reasons for the selection of the site for the "lodge" for this class. It is as closely connected with the wing as possible, and yet detached; the four rooms, which were more than sufficient for their accommodation, were upon that side farthest removed from the other buildings, so that noise and shoutings could not be heard in them; this allowed the free opening of the windows of the lodge at all times.

"The proper situation of the day rooms (or parlors) is a subject on which competent judges entertain different opinions. In several well-approved institutions all the day rooms are on the first or first and second stories. Under this arrangement those who occupy the upper story are during the day removed far from their sleeping rooms. It is true they have a more easy access to their airing courts, and the attendants who keep in the day rooms can more readily afford assistance to each other as it may be needed. But when the sleeping rooms join the galleries and are immediately connected with the day rooms, the members of the family occupying the same are under less restraint and have a greater variety of accommodations. If sitting in the day room become unpleasant, the gallery is at hand for walking, and the airing court is sufficiently easy of access. If a patient be feeble or wearied, and desirous of passing an hour upon his bed, or if he prefer to write or read without the presence of others, his room is near and within the hearing and call of his attendant. These reasons seem to be conclusive for placing the sleeping rooms, day rooms, and galleries contiguous to each other and in the same story."

"The principal objections likely to be urged against this plan are that the classes will be too numerous for quiet or safety, and will require the day rooms (parlors) to be too large. These objections do not appear to me to be valid or in any way proportional to the advantages gained."

Great differences of opinion have existed among those in charge of the insane as to the extent to which classification should be carried. The plan here given and adopted approached individualization. Dr. Bell thought it was carried too far. Of late the opinion has been gaining ground, especially in Europe, that a "strictly individual treatment" is needed. This cannot be approached without a classification at least as detailed as that adopted here more than half a century ago.

"The centre of each wing may be carried up so as to form large halls for the exercise of the boarders in the winter and in stormy weather. Work rooms may be here constructed in which the exercise of some mechanic arts will not disturb the patients in the lower stories."

"The committees and the board of trustees may hold their meetings in the mansion house, some part of which may be used for the chapel."

The physician was descended of a Puritan stock; he believed in the stated religious observance of the Sabbath; he had written in its defense, and believed what he wrote. The patients who were able attended divine service in the neighboring churches. Religious services were also held in the wings Sunday evenings; during which the physician read a sermon to those who were well enough and desired to attend.

"Each family is also provided with dining and work rooms, a separate airing court, and has access to it by separate stairs, that the members of different families may not mix together. The courts are so arranged that patients in an improved state of mind will not see those who are in a worse condition."

"Two rooms are provided for those who need inspection during the night."

"The present garden for the exercise of the male boarders would be contiguous to their airing courts, but the boarders of one sex could not see those of the other during their exercise or amusements. The hill to be formed in glaxis for walks, ornamented with trees and shrubbery."

"In front of each connecting wing is a small court and a low building which is designed for house boarders who may be sick and cannot be removed to either wing or retained in the centre house. Small buildings of one story may be erected in the rear and front yards, as shown in the plans. Their height will not obstruct the view from other houses. This is a want which ought not to be overlooked."

We have here a plan of small, detached, one-story hospital buildings, much after that now so strongly advocated, and within a few years

adopted by the other branch of the Massachusetts General Hospital in Boston.

"Near the broad steps of the stairs are holes through which the galleries and day rooms may be inspected; similar holes are in the walls of the dining-rooms for viewing the tables, etc.; as a like provision is made in each story the whole wing may be inspected without the knowledge of the boarders or attendants. Through these apertures the friends of a patient may see him without exposing him to the dangers of a visit."

Unceasing vigilance is the safety of the insane. These conveniences for the unexpected inspection of the boarders by their friends are a part of a plan. When the boarders were in the airing courts they were seen by their friends from the mansion house through a fine telescope mounted for the purpose. Few better arrangements could be devised for giving friends confidence in the treatment pursued. There may be objection to patients seeing their friends, but none to the friends seeing the patients. The influence of such a system upon all connected with the institution is obvious.

The report is accompanied by detailed plans, in accordance with which the buildings were soon after erected.

As has already been stated, some of the boarders were quite at liberty to come and go as they pleased. These found their own occupation and amusement; one was a frequent visitor at the reading-room of the Boston Athenæum, and might have been seen daily among the literary gentlemen who associated there. A constant effort was made to increase the means of occupation and amusement for all. Walking in the airing courts or in the country with attendants, going to church on Sunday, visiting places of interest on other days, were the most common, or riding in open wagons in pleasant weather. Soon afterwards the physician was "authorized to procure a carriage and pair of horses to be used at the McLean Asylum for the insane, for the purpose of giving air and exercise to the boarders."<sup>1</sup> These rides were then, as now, taken in the neighboring country. They were of necessity confined to those who were comparatively quiet and well behaved. But there were others who needed air and exercise even more than these; for such a carriage-way of nearly half a mile in circuit was made round the garden, where they could ride and where neither their noise nor their appearance would disturb any. A row-boat upon Charles River, then attractive and unpolluted, was in frequent use, affording an amusement particularly relished by those who had been sailors, of whom the asylum usually contained several.

In summer, excursions in the harbor in large boats gave a pleasant sail, a run upon the islands, a chowder on board, and all the enjoyment

<sup>1</sup> Bowditch's History of the Massachusetts General Hospital, page 84.

of a day from home. There was bowling, gardening, the exercise of the mechanic arts, books, papers, and various games. Chess was a favorite with some; the physician was an excellent player, and not unfrequently met with a worthy antagonist among his boarders.

Such was the state of knowledge and such the condition of the several classes of boarders at the McLean fifty years ago, widely different from what is intended to be conveyed by the report of the Board of Health.

"The position and condition of the more quiet of the insane were much better of course," says the report of the board, "but it was reserved for further study and experience to show that the most violent may be treated to a certain extent in a similar way." In expressing this opinion it is to be regretted that we have no account of this improved treatment. Indeed, very little is said, either directly or by the correspondents with regard to the "most violent." We read much — and very pleasant reading it is — of those in England and Scotland whose occupations and treatment seem to be much like that just described as existing here, but I fail to find a satisfactory description of the other class, of their treatment and apartments, either here or abroad. The study and experience of a Scotch physician as late as 1875<sup>1</sup> have convinced him that seclusion is the best for "those who use coarseness of language" and for the "destructive;" of these last two or three cases have occurred in his asylum in a year. To what extent seclusion is carried we have no means of knowing, nor have we any means of knowing if any destroy their clothing and bedding. There are probably such cases in Europe; we certainly have them in Massachusetts. The report gives us no intimation of the proportion of such cases nor of their treatment, either here or abroad; instead of "well-known historic facts" from which to judge of the progress in treating the "most violent" like the more quiet, we have an opinion. But in estimating the value of this opinion we must remember that the point of comparison, the "stone cells in the cellar," is proved not to exist; indeed the whole spirit of the sentence, so far as the McLean Asylum is concerned, shows an absence of a just appreciation of the knowledge and practice of the two physicians who had charge of it through the first half of its existence.

A more ornamental architecture may have been devised, and, it may be, some minor advantageous changes on details in the hope of "hiding by their comfortable and cheerful arrangements the necessities of restraint," but other than these, from my own observation, I do not believe that in either of the two asylums now being built at the expense of the State the arrangements for lighting, warming, and ventilating the apartments for the treatment and safe custody of the "most violent" insane are material improvements over those in use at the McLean fifty years ago.

<sup>1</sup> Report, page 367.



Of the experiments which have been tried here with a reasonable hope of success, some have led to important changes in treatment ; some have been repeated abroad, and after a short trial accounts of them reach us as novelties. Dr. Bell in his final report, after twenty years' service, has some instructive remarks on this subject.

It is now demonstrated :

(1.) That the report has not fairly represented the apartments of the violent male insane at the McLean, nor their treatment during the first thirty years of its existence.

(2.) That the report has not fairly represented the state of knowledge at the McLean with regard to insanity, nor the treatment there of the insane generally during the same period.

The report has been written, printed, and distributed at the expense of the State ; it bears the seal of the Commonwealth ; it goes forth to the people for whom it is written as a historical state document, and takes its place in public libraries bearing an authority which belongs to no individual ; its statements, therefore, should be cautiously made and carefully verified. It is to be hoped, inasmuch as the board has elsewhere been pleased to make favorable mention of my father's services, that the facts here presented under a sense of filial duty will also induce it to correct any errors prejudicial to his merits into which it may have fallen. As the first physician of the McLean he laid well and deep the foundation of a class of public charities before unknown in New England ; he devoted himself to the one great object of his life with an untiring energy and fidelity scarcely to be equaled ; the evidence of the operations of his mind are still obvious in the mechanical and architectural arrangements and in the moral *régime* and internal system of most of the institutions for the insane in the land. Such services I would not have forgotten or undervalued in a history of insanity by an official board of his native State.

CAMBRIDGE, December, 1877.

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### CHLORODYNE.

BY JOHN H. GILMAN, M. D., LOWELL.

THE above fanciful name was first applied by J. Collis Brown, of London, to a preparation which he originated and prescribed for the relief of pain. This valuable remedy is often prescribed by physicians, but unfortunately its exact composition has never been made public, though the principal agents composing it are well known to the profession. Many formulæ of chlorodyne have been published, differing widely in the proportion of their ingredients, but not materially in the ingredients themselves. In the original article and all the published substitutes that I have seen, the method of combining the ingredients of the preparation is both faulty and unscientific, being in fact the mixture

with treacle of certain articles, which are insoluble in it, which separate on standing, and which require to be shaken together when used. Some time ago I made some experiments with the object of producing a chlorodyne in which all its ingredients should be so combined as to form a perfectly clear solution, which could be diluted with water without separating into its component parts, and a preparation of which each dose should contain a definite quantity of each active ingredient. Taking advantage of the fact that chloroform is soluble in glycerine (one part to six or seven), I have added glycerine to my formula to replace part of the treacle, in order to render the chlorodyne a perfect solution. As elixirs are now fashionable I have given this preparation the technical name of *Elixir Chloroformi Compositum* (Chlorodyne):

|                                     |           |
|-------------------------------------|-----------|
| Rx Chloroformi . . . . .            | 3 ij.     |
| Glycerinæ . . . . .                 | 3 ij.     |
| Spts. vini rectificati . . . . .    | 3 ij.     |
| Spts. menthæ piperitæ . . . . .     | 3 ij.     |
| Acid. hydrocyanici diluti . . . . . | 3 ij.     |
| Tinct. capsici . . . . .            | 3 ij.     |
| Morphiæ muriatis . . . . .          | gr. viij. |
| Syrupi (treacle) . . . . .          | 3 iij. M. |

Dose for an adult, one teaspoonful; for a child one year old, three to five drops, diluted with water, repeated at proper intervals if necessary.

A fluid drachm contains two minims each of chloroform, dilute hydrocyanic acid, tinct. capsicum, and essence of peppermint; also, an eighth of a grain of morphine. The treacle employed should be the best sugar-house molasses (golden syrup), so that the chlorodyne will have a fine appearance.

This chlorodyne requires no special skill to compound, and is equal to any for the relief of pain, vomiting, cholera morbus, etc. The dose of this preparation, it should be remembered, is greater than that of Brown's chlorodyne.

## RECENT PROGRESS IN DERMATOLOGY.<sup>1</sup>

BY JAMES C. WHITE, M. D.

*Pompholyx. Dysidrosis.* — Dr. A. R. Robinson, of New York, communicates,<sup>2</sup> in a valuable article upon this affection, the results of a thorough study of its pathological histology. The disease, described by Fox in 1873 as dysidrosis, and by Hutchinson in 1876 as cheiro-pompholyx, is characterized by the development of vesicles and bullæ, mostly upon the lateral surfaces of the fingers and upon the palms. The efflorescence is deeply situated, does not rupture easily, and resembles sago grains. Fox has maintained that the contents of the vesicles were sweat, and that the affection was one of these glands or their ducts. This

<sup>1</sup> Concluded from page 656.

<sup>2</sup> Archives of Dermatology, vol. iii., No. 4.

opinion was dissented from at the time of its publication,<sup>1</sup> and Mr. Hutchinson describes the collection of fluid as serous, but not eczematous. Dr. Robinson reviews our knowledge of the structural anatomy of vesicles and bullæ in all affections in which they are known to occur, and then proceeds to give the changes in the skin in this affection as he has studied them. These changes are described with great minuteness, and are illustrated by several well-drawn figures. He found that the fluid within the vesicles was alkaline, contained out-wandered white blood corpuscles, and was highly albuminous, to the same degree as serum. The sweat glands and ducts were found to be perfectly normal. The vesicles were apparently formed, as the inflammatory vesicle is, by the escape of fluid from the papillæ, which is effused at first between the cells of the rete at all levels, and they enlarge by the breaking away of the cell partitions between separate chambers. By the union of such single vesicles large bullæ may be formed. In the later stages dilatation of the papillary vessels and abundant cell infiltration in the corium occur. Dr. Robinson regards the disease as a neurosis, and distinct from previously known vesicular or bullous affections. We fail to see, however, in what respect the eruption differs anatomically from a dermatitis, or clinically from the vesicles upon the same parts in rhus poisoning or some forms of palmar eczema.

*Bullous Eruption due to Iodide of Potassium.*—Dr. Van Harlingen publishes<sup>2</sup> the report of a lecture by Dr. Duhring, of Philadelphia, upon a rare form of eruption situated upon the hands, arms, groins, and feet, in a patient who had been taking iodide of potassium for eczema. The efflorescences were vesicles of all sizes up to that of a pea, becoming confluent and forming bullæ. They contained a clear, serous fluid, and were seated upon a slightly hyperæmic but not inflamed base. In their early stage they resembled upon the hands the eruption in the so-called dysidrosis, but when older they became semi-opaque and shriveled, and dried up without forming crusts. The lesions disappeared in a few days after discontinuing the use of the drug. None of the ordinary follicular inflammation produced by it was observed.

*Purpura produced by Iodine.*—M. Fournier describes<sup>3</sup> a new effect of this drug upon the cutaneous tissues, the production of petechiæ. In all the cases observed, the eruption of the purpura took place a few days after the administration of the iodide of potassium, in a period of from one to six days. In some of the patients the same effect followed each fresh administration of the iodide, while in one of them each marked elevation of the dose during treatment was accompanied by a revival of the eruption. In all cases but one the eruption occupied the

<sup>1</sup> Semi-Annual Report of Dermatology, June, 1873.

<sup>2</sup> Philadelphia Medical and Surgical Reporter, August 4, 1877.

<sup>3</sup> Le Mouvement médical, No. 37, 1877.

anterior tibial surface; in that one the trunk was affected. The form of the eruption was miliary. It was unaccompanied by subjective symptoms, and disappeared spontaneously in two or three weeks. M. Fournier can find nothing to explain its occurrence but individual predisposition.

*Multiple, monolateral Nævus.* — Prof. J. N. Hyde, of Chicago, reports<sup>1</sup> a remarkable case of pigmented nævus, distributed in the form of bands of more or less scattered moles of varying depth of color upon the left side of the trunk. The regions of distribution, four in number, corresponded closely to those most commonly occupied by herpes zoster of the trunk, and nowhere extended beyond the median line of the body. They were regions supplied by the anterior branches of the lateral cutaneous nerves. The moles were congenital, or developed soon after birth, and indicated, according to Dr. Hyde, intra-uterine perturbations of the nervous ganglia of the fœtus. The distribution of vascular nævi in some instances, as first pointed out by Bärensprung, supports this view, and Simon<sup>2</sup> feels warranted from the study of certain cases to introduce the term "Nerven-nævi" to express the intimate relationship between their distribution and that of the cutaneous nerves.

*Argyria.* — Neumann publishes<sup>3</sup> a long account of the changes which take place in the tissues of the body in this affection (staining by the internal use of nitrate of silver). He gives the particulars of a case in which the microscopical investigation of the cutaneous tissues was made by himself, with illustrations of the appearances presented. They are identical with those discovered by Riemer, and are described at length in a former report.<sup>4</sup>

*Alopecia Areata.* — P. Michelson publishes<sup>5</sup> a long paper upon the ætiology of this affection, in which he gives an extended review of the various opinions which have been held by past and present writers, and gives two cases, with drawings of the microscopic appearances of the affected hairs. He finds no evidence of its parasitic nature. The anatomical changes, according to his investigations, consist mainly in an atrophy of the intra-cutaneous portions of the hair. The neurotic nature of the affection he regards as purely hypothetical, and believes that the phenomena may be as explicable by a local, circumscribed failure in nutrition from occlusion of the cutaneous vessels. It cannot be said that the article adds much to our previous knowledge.

*The Treatment of Lupus.* — Dr. Piffard,<sup>6</sup> in a paper read before the New York State Medical Society in June last, speaks at length of the

<sup>1</sup> Chicago Medical Journal and Examiner, October, 1877.

<sup>2</sup> Archiv für Dermat. und Syph., iv. Jahrg., erstes Heft.

<sup>3</sup> Stricker's medizinische Jahrbücher, iii. Heft, 1877.

<sup>4</sup> JOURNAL, December 9, 1875.

<sup>5</sup> Ueber Herpes tonsurans und Area Celsi. Volkmann's Sammlung klin. Vorträge, No. 120.

<sup>6</sup> New York Medical Record, July 21, 1877.

comparative merits of various methods of treating the disease. The result of his own experience is formulated as follows:—

|  | Successful. | Unsuccessful. |
|--|-------------|---------------|
| Scraping and chloride of zinc . . . . .        | 0           | 4             |
| Chloride of zinc (lesion very small) . . . . . | 1           | 0             |
| Scraping and nitrate of silver . . . . .       | 0           | 1             |
| Actual cautery . . . . .                       | 4           | 2             |
| Excision . . . . .                             | 6           | 2             |
| Excision and actual cautery . . . . .          | 1           | 0             |
| Scraping and actual cautery . . . . .          | 4           | 0             |

He prefers the method of thoroughly scraping out as much of the lesion as possible, and then cauterizing the floor and edges of the wound with the actual cautery at a white heat. Success is in direct proportion to thoroughness of removal of the lupous cells.

*Leprosy in Mauritius.*—Dr. Labonté, from observation and local experience of the disease, which has lately become very prevalent there, concludes<sup>1</sup> that it is a dyscrasia. That its incubation is uncertain, being met with at different periods of life, but the period of puberty would seem to be most favorable for its development. That sex has no influence over the disease. That habitual residence, so far as the population is concerned, is of no consequence. That Asiatics and creoles are especially liable to it; but that Europeans are under the same liability when in the colonies. That diet influences the disease, low as high living being equally bad. That the poison of syphilis concurs in a large number of cases to produce results very similar to what that of leprosy itself produces. That his experience does not warrant the opinion that the disease is catching, but direct inoculation is to his mind a certain way of transmitting it from the sick to the healthy, and vaccination is one of the means by which this is effected. That, finally, the disease is hereditary beyond doubt.

*Leprosy in the Sandwich Islands.*—Dr. F. H. Enders makes a communication<sup>2</sup> on the present condition of the disease after a residence long enough to have seen over four hundred cases. He is strongly inclined to the belief that it is “an offspring of syphilis,” for he has found but two lepers in which there could be a doubt of the preëxistence of syphilis. He has seen only four cases among Europeans, but finds it most rife where there is most prostitution. He believes that the disease is hereditary, but has not formed a positive opinion as to its contagiousness. Since the establishment of the asylum of segregation and the strict enforcement of the health laws, he states, the number of cases at large is very small and the disease is upon the decrease.

Dr. Enders's views concerning the relationship between leprosy and syphilis are of course not those held by the majority of observers and pathologists, and no more unfavorable field for the study of such con-

<sup>1</sup> Edinburgh Medical Journal, September, 1877.

<sup>2</sup> Louisville Medical News, September 29, 1877.

nection could be found than amongst a people so thoroughly syphilized as the natives of the Hawaiian Islands. That the disease is very frequently, perhaps most generally, communicated, like syphilis, by sexual intercourse, there can be little doubt. With regard to treatment he has little of value to offer.

*Pruritus Cutaneus.*—Dr. R. W. Taylor, of New York, presents, in a paper<sup>1</sup> read before the Burlington Medical and Surgical Club, the chief causes of this distressing affection in its various forms, and gives at great length the indications for internal treatment, and in detail all the remedies which have been found to be of service in the form of local applications. The great number of the latter mentioned by him is the most conclusive evidence of the inefficacy of them at all times. Yet from this complete list of formulæ and simples one ought almost always to be able to select the means of affording relief to the agitated cutaneous nerves. We wish that Dr. Taylor had informed his hearers what active or efficient principle other than spirit and water the “extract of hammamelis” contains, which he mentions as a household remedy.

*Cysticercus of the Skin.*—Dr. Guttmann reported<sup>2</sup> to the Berlin Medical Society the case of a patient who presented under the skin of various parts of the body a number of little tumors, easily movable, elastic or cartilaginous in feel, round or oval in shape, and varying in size from a cherry-stone to a small filbert. They were not at all painful on pressure. They had attracted the patient's attention about Christmas time, and in February, when he was first seen by Dr. Guttmann, they had increased to twenty in number. A few weeks later more than thirty were to be seen and felt. Some of the tumors, which were situated immediately beneath the skin, were cut out and found to be cysts of the cysticercus cellulosæ, and one of them contained even the ripe joints of *tænia solium* with ova. That the infection of the patient was recent was shown by the continual fresh appearance beneath the skin of the wandering embryos.

*Demodex Folliculorum.*—M. Meguin publishes a paper<sup>3</sup> upon this parasite of the sebaceous glands. It does not belong to the same family (sarcoptides) as the itch insect, but forms the only genus of a family of demodicides. There is but a single species occurring upon man, those inhabiting the hair and sebaceous follicles of the dog, cat, sheep, and other animals being distinct, and are not transferable to the skin of the former.

*The Use of Natural Baths in Skin Diseases.*—M. C.-A. Carry expresses<sup>4</sup> the opinion that the reputation which baths have in the treat-

<sup>1</sup> Archives of Clinical Surgery, August, 1877.

<sup>2</sup> Berlin. klin. Wochenschrift, June 25, 1877.

<sup>3</sup> Robin's Journ. d'Anat., March, 1877.

<sup>4</sup> Le Mouvement médical, No. 39, 1877.



ment of affections of the skin is factitious. That in reality in the few diseases in which they are of any service their action is never curative. In affections due to an external cause they serve to cleanse the skin and may destroy parasites of an animal nature, but have little effect over those of a vegetable nature. In scrofulous and syphilitic diseases baths by their tonic and stimulating effects are often good adjuvants to general treatment. Their local influence in dry forms of eruption is purely hygienic and in no way curative, while in the moist forms they are nearly always an obstacle to recovery. With which opinions most observers outside of watering-places would generally concur.

*On the Use and Action of the Continual Bath.* — Dr. Hans Hebra begins<sup>1</sup> a series of articles upon this method of treatment in skin diseases, which are to contain the results of its employment by his distinguished father during the fifteen years in which it has been used. The first paper, which has alone reached us, contains a general description of the bath and of its physiological effects. It consists of a tub well supplied with woollen and linen coverings upon which the patient rests, with pillows, and with the proper means of regulating the temperature of the water. In this water-bed the patient, if accustomed to lie in bed, is as comfortable as in a dry bed. The appetite, stools, and urine are normal, the respiration is natural, and there is none of that weakness observed which is supposed to result from a prolonged bath. During the first four or five days there is no change in the skin, excepting a slight sodden condition of the epidermis of the fingers and toes. After this time with nearly all persons, especially with those having corns, there is severe pain for some days in the soles of the feet. In patients with tender skins there is often developed between the eighth and fourteenth day a more or less extensive artificial, papular eczema, accompanied by severe itching. Rubbing with oleum rusci always suffices to make it disappear in a short time. This is the only disturbance, local or constitutional, which has ever been observed among some five hundred persons who have used the bath for continuous periods varying from a few days to three or four months. Among the patients were many women, in whom the function of menstruation went on without disturbance.

The action of the bath upon burns and in pemphigus is given, but the results will be deferred in this report until the papers are complete.

*Iron Soap in Skin Diseases.* — Professor Behr strongly recommends<sup>2</sup> Kral's liquid iron soap as an application in the treatment of ulcers, pruritus cutaneus, epithelioma, comedones, etc.

<sup>1</sup> Wiener med. Wochenschrift, No. 36, 1877.

<sup>2</sup> Allg. Wiener med. Zeitung, May 22, 1877.

EXTRACTS FROM THE RECORDS OF THE ROXBURY  
SOCIETY FOR MEDICAL IMPROVEMENT.

F. W. GOSS, M. D., SECRETARY.

MARCH, 1877. *Digitalis in Pneumonia.* — DR. EDES reported a case of pneumonia to which he had been called on the previous Monday. On Tuesday the temperature was 103° F., respiration not very rapid, pulse 140. On Wednesday the patient was seemingly worse, pulse 160. He gave digitalis, six grains, during the next day, without diminishing the pulse. On Friday he gave eleven grains, and the pulse came down to 92, then to 80, and the patient was now recovering.

In reply to a question whether the fall of the pulse was not due to the fact that the disease had passed its crisis, he said he believed its diminution to have been due to the administration of digitalis. He considered so rapid a pulse as here reported usually to indicate great danger, and he was at a loss to account for its frequency while the temperature and respiration were not indicative of grave sickness. Whether the fact that the disease was at the apex of the lung had anything to do with the acceleration of the pulse he could not tell.

At a subsequent meeting Dr. Edes read the following paper regarding the case referred to :—

It may possibly be remembered that at a previous meeting of this club I reported a case of pneumonia in which a pulse of 160 was spoken of as being a very unusual occurrence in a mild case. In the comments made upon this case it was suggested that such a pulse was *not* unusual, and that a fall from this frequency to the neighborhood of the normal was merely the natural termination of the disease, and something which might be frequently observed.

I was of course unable at the time to oppose to a general statement of this kind anything but a general though very decided opinion to the contrary, but I have since consulted both records and authors, and propose to show

(1.) That in pneumonia a pulse of 140, and, *a fortiori*, one of 160, is an exceedingly grave symptom, usually of fatal import. That the pulse in a general way keeps pace with the severity of other symptoms.

(2.) That the fall of pulse in my case from 160 to 92 beats, that is, of 68 beats, in twenty-four hours, was not from the normal defervescence, or perhaps, to be more strictly accurate, that the previous pulse was not a febrile one.

I have collected from the hospital books and my private notes a considerable number of cases of pneumonia, and have compared with them the report of Dr. Borland in the City Hospital Reports, published in 1870.

In the records of fifty-two cases examined a pulse of 160 is noted once, 150+ once, 150 once, and 180 once. All these cases died, the maximum pulse occurring just before death. In Dr. Borland's one hundred and ninety cases, many of them complicated, a pulse of 150 to 160 is noted once in a fatal case. That is, in two hundred and forty-two cases a pulse of 150 was observed only as an immediate precursor of dissolution.

A pulse of 140 or more is a serious and alarming symptom. I find it in ten of my cases, of which only three recovered, one being a boy of eleven,

the others both having been extremely sick. It is recorded in seven of Dr. Borland's cases, two of which died. Of the five which recovered one was a child of three and a half, one of fifteen, one complicated with pericarditis, and one with cellulitis. With a pulse of 130 my list shows eight cases, three deaths. Dr. Borland's six cases, two deaths.

That these cases agree with the general experience is shown by the statements of authorities. Oppolzer says that the pulse reaches in most cases a frequency of about 100 beats in the minute, but in *severe* cases may arrive at 120 to 130, or even 150 or more. A pneumonia in which the pulse exceeds 100, or reaches 120 or more, gives occasion for serious fears.

Niemeyer says the pulse in severe cases may reach or even exceed 130 to 150. The American edition of Aitken says the rapidity of the pulse is with rare exceptions in direct ratio with the extent and severity of the disorder.

As to the natural resolution of the disease. The fall of pulse and of temperature is no doubt very often, and indeed usually, a rapid or even almost sudden one. My case, as well as many others, would undoubtedly be more interesting if temperature and pulse had been taken at intervals of two or three hours, but this is a delicacy of observation we are seldom able to attain.

Not having found another case of recovery with a pulse of 160, I cannot find a parallel to my own, and the determination of such a resemblance is not quite so easy as the mere observation of maximum pulse and temperature. In all the cases where pulse and temperature were both carefully observed and noted it appeared that the temperature, with a few unimportant exceptions, fell either as soon as or a little before the pulse.

In the exceptions referred to, where the pulse and temperature have gone in opposite directions, or where the pulse has preceded the temperature, the movement has been but slight, a sort of preliminary, as it were, to the marked and rapid change. In my case the thermometer fell but a quarter of a degree, while the pulse fell seventy beats.

This fall in the pulse took place after the administration of digitalis. That it was the effect of this administration I am unable to prove. If, however, the acceleration of the pulse was the result of a temporary paralysis of the pneumogastric nerve and not of the fever, as I think I have shown it not to have been, the phenomena are exactly in accordance with the well-known physiological action of this drug, namely, a stimulating effect upon the pneumogastric. Why is it less philosophical or scientific to refer an effect to a cause which is well known to produce similar effects in other cases than to refer it to a spontaneous action entirely at variance with the natural history of the disease we have been discussing?

SEPTEMBER, 1877. *Electro-Therapeutics.* — DR. WILLIAMS, the reporter for the evening, made some remarks on electricity as a medical agent. He stated that the agent had been before the profession for nearly one hundred years, yet its legitimate place in medicine was still unsettled. The theory of its employment was fascinating on account of its supposed resemblance to the natural nerve force. This theory had led to much exaggeration of its therapeutical powers. He would rank it as of about the same value as arsenic in

medicine. It had certain specific properties, and would do certain specific things which scarcely anything else would do, but could hardly be rated among medicinal agents of the first class.

If a mild galvanic current is passed along a limb, a slight crawling or tingling sensation is produced; as its power is increased the sensation becomes painful and burning, at length unendurably so. It will produce vesication and even cauterization of the parts. Its action, therefore, is that of an irritant. The galvano-caustic is the intensification of this action.

Its chief use in medicine is as a counter-irritant. It is especially useful in neuralgia and muscular rheumatism. It has this advantage over other agents of the same sort, that its effects can be better localized and made to penetrate more deeply into the tissues than that of a blister or liniment. Its value in neuralgia is quite unique. It is, however, an empirical mode of treatment, like that by subcutaneous injections. Neuralgia in the majority of cases is due to local irritation acting directly or reflexively on a nerve. This view was not sufficiently recognized, but the speaker was satisfied of its truth from a careful analysis of private cases. The treatment of the primary lesion is therefore the scientific method in neuralgia.

When a galvanic current of moderate strength is passing continuously through a muscle, no effect is produced; but if the current be suddenly broken, or if, after being broken, is suddenly connected again, muscular contraction takes place. It is not the current itself but the opening and shutting of it which produces contraction. Such is the principle of the faradic or interrupted current, whose specific property is the production of muscular contraction. This form of electricity was introduced into medical practice by Duchenne. It is to be used as a means of exercising a paralyzed muscle and thus preventing the secondary degeneration and atrophy of muscular and nervous fibre which is apt to take place in a paralyzed limb, especially in cases of local or eccentric paralysis. In cases of centric disease these changes come on more slowly. Moreover, the stimulating action of the interrupted current contra-indicates its use in diseases of the nervous centres, in which it may be productive of serious injury. Its main use, therefore, is in cases of eccentric paralysis. It may be regarded as a form of passive motion.

It has been found that there is a certain spot or there are spots over each muscle where the pole of the instrument must be applied in order to produce the most vigorous contractions. This important fact was discovered by Duchenne, and the places were subsequently shown by Remak to be the points where the nerves lie nearest the surface. A knowledge of these points is essential to the practical employment of the faradic battery. Their situation is conveniently indicated on a set of plates published by Ziemssen.

In certain cases of paralysis the interrupted current fails to produce contractions when the constant current will, for reasons difficult to assign. In such cases the latter should be used. Sometimes a change from one to the other is beneficial.

The power of the galvanic current to produce coagulation of the blood has led to its being tried for the cure of aneurisms. It has been recommended also for the discussion of tumors, in which it probably has the same action as

other irritants and caustics. The superior advantages of the galvano-cantery in general surgery were fully recognized.

There are many other uses of the constant current advocated by Remak and most of the German writers on the subject. The former, a clever but erratic genius, attempted to set himself up as the special champion of the constant current in opposition to Duchenne, the introducer and chief advocate of the interrupted current. Many of the statements and pretensions of Remak have been proved to be entirely erroneous, and the question of the real value of the constant current in medicine is still *sub judice*. It is probably of much less utility than its German adherents have claimed.

DR. SEAVERNS remarked that he believed we had yet much to learn regarding electricity, and he considered it to be a valuable therapeutical agent. In neuralgias the interrupted current had often seemed to him to have an irritant effect, while that of the constant current was soothing. He had at times found the employment of electricity in centric troubles to be harmful.

DR. NICHOLS said that the muscular contraction accompanying the application of electricity is not due altogether to reflex action. In a muscle separated from the body we find that contractions will take place from the application of various forms of irritation.

DR. S. G. WEBBER, who was present by invitation, remarked that electricity has been overpraised by some, and too readily condemned by others. There is a temptation to use it in a routine way. The galvanic current is of use to relieve pain; he would hardly agree with Dr. Williams that it is even chiefly a counter-irritant. A very mild current, so mild as to cause no irritation, will both soothe a limb and change its temperature. Pain from whatever cause may often be alleviated, whether neuralgic, rheumatic, or even if caused by necrosed bone. Electricity when passing through a wire, if there is another metallic body near it, will change the electrical condition of the latter by induction, and the change of electrical state of the body or its tissues by induction may have a beneficial effect, though the laws by which these effects are produced are not yet sufficiently well known. The faradic current is not of use for the relief of pain except occasionally, and then by counter-irritation. The application of as strong an interrupted current as the patient can bear has been recommended of late in the treatment of acute rheumatism.

Dr. Webber used to be skeptical as to the value of the interrupted current in paralysis from centric lesion, as in hemiplegia, but he has frequently found patients benefited up to a certain point as to the use of their limbs and the diminution of discomfort; beyond that point benefit does not go. If benefit is to come it usually shows itself within a few weeks at most. Harm may result from using the agent too soon and too harshly. Use a current that is not painful to the patient and just barely strong enough to move the muscles slightly. In peripheral paralysis the faradic current may or may not be of use; if not, try the galvanic. He could hardly agree with Dr. Williams that it prevents atrophy of the muscles; they will degenerate while electricity is being used, and cease to respond to the current on account of such degeneration. To relieve spasm electricity may be of use, but not in that coming on in hemiplegia two or three months after its occurrence. It is of no use in such cases.

Spasms of a different kind, as clonic spasm of the sterno-mastoid, may be relieved by applying the galvanic current to the back of the neck and to the affected muscle, and it may sometimes be assisted by applying the faradic to the opposite well muscle.

One of the most important uses of electricity is for diagnosis; for example, if in facial paralysis from cold the muscles do not respond, we can say the cause of the paralysis is not in the brain itself, and, if no other symptoms point to cerebral lesion, may assure the patient there is none. So sometimes we can ascertain in paralysis of the limbs whether there has been centric lesion or not. If there is no response to the faradic current, it is one aid in locating the lesion in the nerve itself or in the spinal cord at the point whence the nerve arises from the cells of the anterior cornu.

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### CUTANEOUS AND VENEREAL MEMORANDA.<sup>1</sup>

THIS miniature volume has been prepared, as its authors state, for the benefit of the many students who are unable to procure works upon the subjects of which it treats during their pupilage. The first part is a very brief epitome of Dr. Piffard's large treatise on diseases of the skin, which was published in 1876, and reviewed in the *JOURNAL* (June 22d of that year). The present volume, although arranged in conformity with the author's peculiar theories, is mainly practical in its bearings, and contains very concise and clear descriptions of the diseases of the skin, and judicious directions for treatment. As lately said concerning a similar English work by Tilbury Fox, the legitimate province of such books is very limited, and we should advise every student who desires to become acquainted with Dr. Piffard's views, or to keep in remembrance his teachings, to spend a little more money and buy his larger treatise.

The latter part of the volume, by Dr. Fox, forms an excellent little manual of venereal diseases. His descriptions of these affections are remarkably good; his opinions concerning their nature are in unison with those of the soundest syphilographers, and his directions for treatment are ample and wise. It will make a valuable guide in the treatment of these diseases, even for the practitioner.

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### THE HARVARD MEDICAL SCHOOL.

THE appearance of this year's catalogue of the school has been looked forward to with much interest, as all were anxious to see the result of the preliminary examinations which were held for the first time. It is particularly important, moreover, in judging of the success of the graded course to observe how many drop out on the way and how many apply for advanced standing.

<sup>1</sup> *Cutaneous and Venereal Memoranda.* By HENRY G. PIFFARD, A. M., M. D., Professor of Dermatology, University of the City of New York, and GEORGE HENRY FOX, A. M., M. D., Surgeon to the New York Dispensary. New York: William Wood & Co. 1877. Pp. 301.



It is gratifying to find that each year there is a larger percentage of former students. We give below some figures obtained by comparing the present catalogue with the preceding one, which we think may be of interest —

## SUMMARY FOR THE YEAR 1877-78.

|                                |            |
|--------------------------------|------------|
| Graduates' course . . . . .    | 7          |
| Third-Year Students . . . . .  | 48         |
| Second-Year Students . . . . . | 67         |
| First-Year Students . . . . .  | 90         |
| <b>Total . . . . .</b>         | <b>212</b> |

## FOR THE YEAR 1875-76.

|                             |            |
|-----------------------------|------------|
| Graduates' Course . . . . . | 9          |
| Third Class . . . . .       | 56         |
| Second Class . . . . .      | 51         |
| First Class . . . . .       | 114        |
| <b>Total . . . . .</b>      | <b>230</b> |

This shows a total diminution of eighteen. Subtracting those in the graduates' course there are two hundred and five present members, of whom at least one hundred and twenty-two were in the school last year. Of the forty-eight third-year students, forty-four are old ones, as are all but two of the sixty-seven second-year men. Of the ninety in the lowest class are thirteen who last year failed to pass the examinations for promotion. Of last year's first class seventy-seven remain in the school. This is certainly a good showing, and to many friends and enemies it will be a surprise. Many of the former had prophesied that the preliminary examination would affect the school seriously, and some of the latter have been circulating most mournful accounts of the falling off.

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MEDICAL NOTES.

— *The Medical Record* mentions the fact of an epidemic of lead poisoning which occurred in Paris not long ago. It also states that by an investigation that was remarkable for the analytical and detective skill which it manifested, Dr. Decamps ascertained that the poison was conveyed in bread baked in ovens which had been heated by old painted wood taken from demolished buildings. As a result of his investigations the municipal council of Paris has issued a decree forbidding the use of such wood in heating ovens.

— We read in the *British Medical Journal* that a fire occurred at the Hôpital St. Antoine, in Paris, on November 15th, but fortunately it was confined to the wooden huts which were annexed to the hospital during the late war for the accommodation of one hundred and fifty patients. It was intended that these huts should disappear to make room for a building of brick and mortar, but from want of funds and other circumstances this could not be accomplished. The wooden huts are completely reduced to ashes, the fire, which commenced about ten o'clock on Thursday night, having continued its destructive work for two days. It originated in the iron pipes destined to convey the heat through the wards from a large stove situated outside the building. These became



overheated, and the excessive heat, radiating in all directions, set the huts in a flame. The fire was providentially detected in time to enable the inmates of the huts to escape. Two female patients, however, fell victims, and were completely charred before any assistance could be rendered them.

— We are glad to learn that a monument has been placed over the remains of Dr. Charles E. Buckingham, at Mount Auburn, by his many friends and former patients. It has the following inscription, written by Dr. Calvin Ellis: "The testimony of grateful patients to rare ability, devotion, and integrity."

— *The Richmond and Louisville Medical Journal* for November contains a case of "death from ether" that is a specimen of a class. Dr. H. V. Passage, of Peru, Indiana, operated for the removal of a large bronchocele. "It was evident," says the doctor, "he was sinking fast, and that left to nature he must die in a few days." After the beginning of the operation the patient showed signs of suffocation, after which he became lethargic and died. The tumor was found to have caused absorption of the cartilages and to protrude into the trachea. This the learned gentleman calls a death from ether.

— Our readers will perhaps remember some remarks which we made concerning medical journals under the heading of the *Survival of the Fittest*. We are pleased to find that the *Medical Times and Gazette* handsomely indorses our opinion of the *American Journal of the Medical Sciences*. "We quite agree with the critic that this journal is second to none in the language, and cheerfully accord to it the first place, for nowhere shall we find more able and more impartial criticism, and nowhere such a repertory of able original articles." The *Times and Gazette* corrects an error into which we had fallen concerning the *Edinburgh Medical Journal*, and gives some statistics concerning other periodicals that may be of interest. The *Edinburgh Medical Journal* bears its present title only since 1855, being the continuation of the *Monthly Journal of Medical Science*, which appeared in 1841. The *Edinburgh Medical and Surgical Journal* began in 1805 and stopped in 1854. We find that there are but two French medical journals older than ourselves. One is the *Revue médicale*, first a monthly, now a weekly, which dates from 1820, and the other the *Archives générales de Médecine*, which commenced three years later. No German medical periodical has reached our age, but the Italian *Annali Universali di Medicina*, which still survives, is twelve years older, as it appeared in 1816.

— Sir William Stokes, the distinguished Irish physician, is seriously ill. He has had a stroke of paralysis.

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### A REPLY TO DR. CURTIS.

MESSRS. EDITORS, — Some time ago<sup>1</sup> I had the honor of presenting to your readers an objection, which seems to me unanswerable, against the decimal system of weights and measures. It was stated that the practice of counting by tens has no foundation whatever in the philosophy of numbers, and originated solely in the accident of a man's having ten fingers. It may be fitly

<sup>1</sup> JOURNAL, October 28, 1875, and November 11, 1875.

called finger-reckoning. It was shown by reasoning which every mathematician will indorse how greatly our arithmetic was complicated by this unlucky blunder of enumeration, and how vastly the whole science might be simplified by the adoption of a duodecimal instead of a decimal notation.

I did not think it worth while to carry the argument further at that time, as a medical journal is hardly the place for such discussions, but since Dr. Curtis has characterized this line of argument as "transcendental" you will, perhaps, allow me a word more.

What is true of arithmetic is true of all mathematics. If logarithmic tables could be calculated on a duodecimal instead of a decimal basis, the use of infinite series of numerals would be in a great measure avoided. Logarithms of two or three places would then be far more accurate than those of five and six places now, are to the enormous advantage of every species of trigonometrical calculation. The practical usefulness of such a system in applied mathematics, as in engineering, navigation, and astronomy, for instance, will present itself to every educated mind. These points have been fully recognized by the foremost mathematicians from Leibnitz to Peirce. They seem to me the opposite of "transcendental."

I can conceive that such considerations may be above the level of the common run of surveyors and apothecaries, but they certainly ought not to fail of appreciation from educated professional men.

Respectfully yours,

EDWARD T. WILLIAMS.

2298 WASHINGTON STREET, ROXBURY.

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#### OBITUARY.

J. SMITH ROSS, A. B., M. D., was buried from the house of his venerable father, Samuel Ross, Esq., in Bath, on Sunday, November 25th.

Dr. Ross was a graduate of Dartmouth College, and a medical graduate of the Jefferson Medical School of Philadelphia. He was surgeon of the 11th New Hampshire Volunteers, and served as brigade and division surgeon. He was a member of the order of the Grand Army of the Republic. He successfully practiced medicine and surgery in Bath for a few years in company with the late John French, M. D. He then settled in Great Falls, N. H., where he soon obtained extensive and lucrative practice. During many years he had suffered from an obstinate and painful form of chronic rheumatism. This was aggravated by malarial poisoning contracted during his army service. He continued in active practice until a few days before his death, though constantly suffering the tortures of rheumatic pains and the depression of the malaria. He loved his profession, devoting to it all his energies and talents. He was held in high esteem by thousands of his patrons. He was a polished scholar and eminently a scientific physician, and was always in the front rank of his profession. At his funeral the following-named medical men acted as bearers: Drs. John McNab, of Woodsville, N. H. Watkins, of Newbury, W. S. P. Carbee, of Haverhill, Charles H. and O. H. Boynton, of Lisbon, and William Child, of Bath, N. H. The religious services were conducted by Rev. G. W. Kenney, of the Bath Congregational Church, and the funeral ceremonies by George Morrison, Esq. The late Dudley Ross, H. P. Ross, Mrs. D. K. Jackman, and Mrs. Cyrus Eastman were brothers and sisters of the deceased. W. C.

BATH, N. H., November 26, 1877.

## COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING DECEMBER 1, 1877.

|                       | Estimated Population,<br>July 1, 1877. | Total Mortality<br>for the Week. | Annual Death-Rate<br>per 1000 for the Week. | Death-Rate for the<br>Year 1876. |
|-----------------------|--|----------------------------------|---|----------------------------------|
| New York <sup>2</sup> | 1,077,228                              | 409                              | 19.74                                       | 27.46                            |
| Philadelphia          | 850,856                                | 253                              | 15.46                                       | 22.88                            |
| Brooklyn              | 527,830                                | 177                              | 17.43                                       | 24.31                            |
| Chicago               | 420,000                                | 126                              | 15.59                                       | 20.41                            |
| Boston                | 363,940                                | 123                              | 17.57                                       | 23.39                            |
| Providence            | 103,000                                | 47                               | 23.73                                       | 18.34                            |
| Worcester             | 52,977                                 | 16                               | 15.71                                       | 22.00                            |
| Lowell                | 53,678                                 | 9                                | 8.72  | 22.21                            |
| Cambridge             | 51,572                                 | 16                               | 16.13                                       | 20.54                            |
| Fall River            | 50,372                                 | 30                               | 30.97                                       | 22.04                            |
| Lawrence              | 37,626                                 | 14                               | 19.35                                       | 23.32                            |
| Lynn                  | 34,524                                 | 16                               | 24.09                                       | 21.37                            |
| Springfield           | 32,976                                 | 9                                | 14.19                                       | 19.69                            |
| Salem                 | 26,739                                 | 4                                | 7.78  | 23.57                            |

**BOSTON SOCIETY FOR MEDICAL OBSERVATION.**—At a meeting of the society to be held on Monday evening next, at eight o'clock, at its rooms, 36 Temple Place, Dr. Webber will read a paper upon Tumor of the Cerebellum.

The next meeting of the Middlesex East District Medical Society will be held at the house of Dr. F. Winsor, Winchester, on Wednesday, December 19th, at 7.30, P. M.

Dr. B. J. Jeffries will read a paper on the Ophthalmoscope.

Dr. W. S. Brown will report a case of Typhlitis.

J. RICHMOND BARRE, *Secretary*.

**OMISSION.** Messrs. Editors,—In the report of "the late Dr. Pratt's case," published in last week's issue, by a mistake of mine, the name of Dr. W. M. Mercer, of Pittsfield, was omitted from the list of the physicians who were associated with me in the treatment of the case, and also assisted at the autopsy. By publishing this correction you will confer a great favor upon  
Yours very truly,  
FRANK K. PADDOCK.

**BOOKS AND PAMPHLETS RECEIVED.**—Forty-Sixth Annual Report of the Trustees of the Perkins Institution and Massachusetts School for the Blind for the Year ending September 30, 1877.

Annual Report of the Surgeon-General of the United States Army. 1877.

Plan of the Hall of the Young Men's Christian Union.

Modern Surgical Therapeutics. By George H. Napheys, M. D. Philadelphia: D. G. Brinton & Co. 1878. (For sale by A. Williams & Co.)

Massachusetts Institute of Technology. Thirteenth Annual Catalogue. 1877-78. Boston.

The Physician's Hand-Book for 1878. By William Elmer, M. D., and Albert D. Elmer, M. D., New York: W. A. Townsend, Publisher. 1878.

Report of the Board of Health of the City of Nashville. 1877.

Lectures on Clinical Medicine. By Dr. McCall Anderson. London: Macmillan & Co. 1877. (For sale by A. Williams & Co.)

Typical Case of Addison's Disease, with Remarks. By George Ross, A. M., M. D. Montreal. 1877. (From the Transactions of the Canada Medical Association.)

Reports of the Physician and Treasurer of the Sea-Shore Home for the Summer of 1877.

Excision of the Knee-Joint. By George E. Fenwick, M. D., Professor of Surgery, McGill University, Montreal. (From the Transactions of the Canada Medical Association.) Montreal. 1877.